

# SEQUENCE LISTING

<110> The Government of the United States of America as  
represented by the Secretary of the Department of Health and  
Human Services  
Pastan, Ira  
Brinkmann, Ulrich  
Vasmatzis, George  
Lee, Byungkook

<120> PAGE-4, an X-Linked GAGE-Like Gene Expressed in Normal and  
Neoplastic Prostate, Testis and Uterus, and Uses Therefor

<130> 4239-61541-01

<140> US 09/763,393

<141> 2001-07-30

<150> PCT/US99/20046

<151> 1999-08-31

<150> US 60/098,993

<151> 1998-09-01

<160> 16

<170> PatentIn version 3.3

<210> 1

<211> 102

<212> PRT

<213> Homo sapiens

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Met Ser Ala Arg Val Arg Ser Arg Ser Arg Gly Arg Gly Asp Gly Gln  
1 5 10 15

Glu Ala Pro Asp Val Val Ala Phe Val Ala Pro Gly Glu Ser Gln Gln  
20 25 30

Glu Glu Pro Pro Thr Asp Asn Gln Asp Ile Glu Pro Gly Gln Glu Arg  
35 40 45

Glu Gly Thr Pro Pro Ile Glu Glu Arg Lys Val Glu Gly Asp Cys Gln  
50 55 60

Glu Met Asp Leu Glu Lys Thr Arg Ser Glu Arg Gly Asp Gly Ser Asp  
65 70 75 80

Val Lys Glu Lys Thr Pro Pro Asn Pro Lys His Ala Lys Thr Lys Glu  
85 90 95

Ala Gly Asp Gly Gln Pro

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<212> PRT  
<213> Homo sapiens

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Met Ser Trp Arg Gly Arg Ser Thr Tyr Arg Pro Arg Pro Arg Arg Tyr  
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Val Glu Pro Pro Glu Met Ile Gly Pro Met Arg Pro Glu Gln Phe Ser  
20 25 30

Asp Glu Val Glu Pro Ala Thr Pro Glu Glu Gly Glu Pro Ala Thr Gln  
35 40 45

Arg Gln Asp Pro Ala Ala Ala Gln Glu Gly Glu Asp Glu Gly Ala Ser  
50 55 60

Ala Gly Gln Gly Pro Lys Pro Glu Ala Asp Ser Gln Glu Gln Gly His  
65 70 75 80

Pro Gln Thr Gly Cys Glu Cys Glu Asp Gly Pro Asp Gly Gln Glu Met  
85 90 95

Asp Pro Pro Asn Pro Glu Glu Val Lys Thr Pro Glu Glu Glu Met Arg  
100 105 110

Ser His Tyr Val Ala  
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<210> 3  
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Met Ser Trp Arg Gly Arg Ser Thr Tyr Arg Pro Arg Pro Arg Arg Tyr  
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Val Glu Pro Pro Glu Met Ile Gly Pro Met Arg Pro Glu Gln Phe Ser  
20 25 30

Asp Glu Val Glu Pro Ala Thr Pro Glu Glu Gly Glu Pro Ala Thr Gln  
35 40 45

Arg Gln Asp Pro Ala Ala Ala Gln Glu Gly Glu Asp Glu Gly Ala Ser  
 50 55 60

Ala Gly Gln Gly Pro Lys Pro Glu Ala His Ser Gln Glu Gln Gly His  
 65 70 75 80

Pro Gln Thr Gly Cys Glu Cys Glu Asp Gly Pro Asp Gly Gln Glu Met  
 85 90 95

Asp Pro Pro Asn Pro Glu Glu Val Lys Thr Pro Glu Glu Gly Glu Lys  
 100 105 110

Gln Ser Gln Cys  
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Met Asn Leu Ser Arg Gly Lys Ser Thr Tyr Tyr Arg Pro Arg Pro Arg  
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Arg Tyr Val Gln Pro Pro Glu Val Ile Gly Pro Met Arg Pro Glu Gln  
 20 25 30

Phe Ser Asp Glu Val Glu Pro Ala Thr Pro Glu Glu Gly Glu Pro Ala  
 35 40 45

Thr Gln Arg Gln Asp Pro Ala Ala Ala Gln Glu Gly Glu Asp Glu Gly  
 50 55 60

Ala Ser Ala Gly Gln Gly Pro Lys Pro Glu Ala Asp Ser Gln Glu Gln  
 65 70 75 80

Gly His Pro Gln Thr Gly Cys Glu Cys Glu Asp Gly Pro Asp Gly Gln  
 85 90 95

Glu Met Asp Pro Pro Asn Pro Glu Glu Val Lys Thr Pro Glu Glu Gly  
 100 105 110

Glu Lys Gln Ser Gln Cys  
 115

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<400> 5

Met Ser Trp Arg Gly Arg Ser Thr Tyr Tyr Arg Pro Arg Pro Arg Arg  
1 5 10 15

Tyr Val Gln Pro Pro Glu Met Ile Gly Pro Met Arg Pro Glu Gln Phe  
20 25 30

Ser Asp Glu Val Glu Pro Ala Thr Pro Glu Glu Gly Glu Pro Ala Thr  
35 40 45

Gln Arg Gln Asp Pro Ala Ala Ala Gln Glu Gly Glu Asp Glu Gly Ala  
50 55 60

Ser Ala Gly Gln Gly Pro Lys Pro Glu Ala Asp Ser Gln Glu Gln Gly  
65 70 75 80

His Pro Gln Thr Gly Cys Glu Cys Glu Asp Gly Pro Asp Gly Gln Glu  
85 90 95

Met Asp Pro Pro Asn Pro Glu Glu Val Lys Thr Pro Glu Glu Gly Glu  
100 105 110

Lys Gln Ser Gln Cys  
115

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Met Ser Trp Arg Gly Arg Ser Thr Tyr Tyr Arg Pro Arg Pro Arg Arg  
1 5 10 15

Tyr Val Gln Pro Pro Glu Val Ile Gly Pro Met Arg Pro Glu Gln Phe  
20 25 30

Ser Asp Glu Val Glu Pro Ala Thr Pro Glu Glu Gly Glu Pro Ala Thr  
35 40 45

Gln Arg Gln Asp Pro Ala Ala Ala Gln Glu Gly Glu Asp Glu Gly Ala  
50 55 60

Ser Ala Gly Gln Gly Pro Lys Pro Glu Ala Asp Ser Gln Glu Gln Gly  
65 70 75 80

His Pro Gln Thr Gly Cys Glu Cys Glu Asp Gly Pro Asp Gly Gln Glu  
85 90 95

Met Asp Pro Pro Asn Pro Glu Glu Val Lys Thr Pro Glu Glu Gly Glu  
100 105 110

Lys Gln Ser Gln Cys  
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Met Ser Trp Arg Gly Arg Ser Thr Tyr Tyr Arg Pro Arg Pro Arg Arg  
1 5 10 15

Tyr Val Gln Pro Pro Glu Val Ile Gly Pro Met Arg Pro Glu Gln Phe  
20 25 30

Ser Asp Glu Val Glu Pro Ala Thr Pro Glu Glu Gly Glu Pro Ala Thr  
35 40 45

Gln Arg Gln Asp Pro Ala Ala Ala Gln Glu Gly Glu Asp Glu Gly Ala  
50 55 60

Ser Ala Gly Gln Gly Pro Lys Pro Glu Ala Asp Ser Gln Glu Gln Gly  
65 70 75 80

His Pro Gln Thr Gly Cys Glu Cys Glu Asp Gly Pro Asp Gly Gln Glu  
85 90 95

Val Asp Pro Pro Asn Pro Glu Glu Val Lys Thr Pro Glu Glu Gly Glu  
100 105 110

Lys Gln Ser Gln Cys  
115

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Met Ser Leu Glu Gln Lys Ser Gln His Cys Lys Pro Glu Glu Gly Leu  
1 5 10 15

Asp Thr Gln Glu Glu Ala Leu Gly Leu Val Gly Val Gln Ala Ala Thr  
20 25 30

Thr Glu Glu Gln Glu Ala Val Ser Ser Ser Ser Pro Leu Val Pro Gly  
35 40 45

Thr Leu Gly Glu Val Pro Ala Ala Gly Ser Pro Gly Pro Leu Lys Ser  
50 55 60

Pro Gln Gly Ala Ser Ala Ile Pro Thr Ala Ile Asp Phe Thr Leu Trp  
65 70 75 80

Arg Gln Ser Ile Lys Gly Ser Ser Asn Gln Glu Glu Glu Gly Pro Ser  
85 90 95

Thr Ser Pro Asp Pro Glu Ser Val Phe Arg Ala Ala Leu Ser Lys Lys  
100 105 110

Val Ala Asp Leu Ile His Phe Leu Leu Leu Lys Tyr  
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Met Leu Leu Gly Gln Lys Ser Gln Arg Tyr Lys Ala Glu Glu Gly Leu  
1 5 10 15

Gln Ala Gln Gly Glu Ala Pro Gly Leu Met Asp Val Gln Ile Pro Thr  
20 25 30

Ala Glu Glu Gln Lys Ala Ala Ser Ser Ser Ser Thr Leu Ile Met Gly  
35 40 45

Thr Leu Glu Glu Val Thr Asp Ser Gly Ser Pro Ser Pro Pro Gln Ser  
50 55 60

Pro Glu Gly Ala Ser Ser Ser Leu Thr Val Thr Asp Ser Thr Leu Trp

65

70

75

80

Ser Gln Ser Asp Glu Gly Ser Ser Ser Asn Glu Glu Glu Gly Pro Ser  
85 90 95

Thr Ser Pro Asp Pro Ala His Leu Glu Ser Leu Phe Arg Glu Ala Leu  
100 105 110

Asp Glu Lys Val Ala Glu Leu Val Arg Phe Leu Leu Arg Lys Tyr  
115 120 125

&lt;210&gt; 10

&lt;211&gt; 87

&lt;212&gt; PRT

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt; PAGE1

&lt;400&gt; 10

Met Ser Ala Arg Val Arg Ser Arg Ser Arg Gly Arg Gly Asp Gly Gln  
1 5 10 15

Glu Ala Pro Asp Val Val Ala Phe Val Ala Pro Gly Glu Ser Gln Glu  
20 25 30

Glu Glu Pro Pro Thr Asp Asn Gln Gly Pro Asp Met Glu Ala Phe Gln  
35 40 45

Gln Glu Leu Asp Leu Glu Lys Thr Arg Ser Glu Arg Gly Asp Gly Ser  
50 55 60

Asp Val Lys Glu Lys Thr Pro Pro Asn Pro Lys His Ala Lys Thr Lys  
65 70 75 80

Glu Ala Gly Asp Gly Gln Pro  
85

&lt;210&gt; 11

&lt;211&gt; 109

&lt;212&gt; PRT

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt; PAGE2

&lt;400&gt; 11

Met Ser Glu Leu Val Arg Ala Arg Ser Gln Ser Ser Glu Arg Gly Asn

1 5 10 15

Asp Gln Glu Ser Ser Gln Pro Val Gly Ser Val Ile Val Gln Glu Pro  
20 25 30

Thr Glu Glu Lys Arg Gln Gln Glu Glu Pro Pro Thr Asp Asn Gln Asp  
35 40 45

Ile Glu Pro Gly Gln Glu Arg Glu Gly Thr Pro Pro Ile Glu Glu Arg  
50 55 60

Lys Val Glu Gly Asp Cys Gln Glu Met Ala Leu Leu Lys Ile Glu Asp  
65 70 75 80

Glu Pro Gly Asp Gly Pro Asp Val Arg Glu Gly Ile Met Pro Thr Phe  
85 90 95

Asp Leu Thr Lys Val Leu Glu Ala Gly Asp Ala Gln Pro  
100 105

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Met Thr Ser Phe Asn Lys Thr Ala Pro Pro Ile Glu Ser Gln Asp Tyr  
1 5 10 15

Thr Pro Gly Gln Glu Arg Asp Glu Gly Ala Leu Asp Phe Gln Val Pro  
20 25 30

Ser Leu Ala Ala Tyr Leu Trp Glu Leu Thr Arg Pro Lys Thr Gly Gly  
35 40 45

Glu Arg Gly Asp Gly Pro Asn Val Lys Gly Glu Ser Leu Pro Asn Leu  
50 55 60

Glu Pro Val Lys Ile Pro Glu Ala Gly Glu Gly Gln Pro Ser Val  
65 70 75

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<400> 13



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<400> 14

Lys Asp Glu Leu  
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<400> 15

Arg Glu Asp Leu  
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<400> 16

Glu Gly Thr Pro Pro Ile Glu Glu Arg Lys Val Glu Gly Asp Cys  
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